

Compton backscattering for the calibration of KEDR Tagging System

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Abstract content

KEDR detector has the tagging system (TS) to study the gamma-gamma processes. To determine the two-photon invariant mass, the energies of the scattered at small angles electrons and positrons are measured by the magnetic spectrometer embedded into the lattice of the VEPP-4M collider. The energy resolution (scattered electron/positron energy resolution divided by the beam energy) of this spectrometer varies from 0.6% to 0.03% depending on the electron/positron energy. The Compton backscattering of laser radiation on the electron/positron beam is used for the accurate energy scale and resolution calibration of the tagging system. The report covers the design, recent results and current status of the KEDR TS calibration system.

Summary

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